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ABSTRACT

A study was conducted to identify reasons why high school students elect not to enroll in a vocational curriculum. Data were collected via questionnaires sent to all 11th graders in 5 schools selected randomly in Southwestern Ohio (633 responses). Some of the findings of the study were the following: (1) 60 percent of the sample were enrolled in an academic curriculum, whereas 40 percent were in a general curriculum; (2) white male students from a higher socioeconomic status and in an academic curriculum had the most negative images of vocational education; (3) major reasons for not enrolling in vocational education included "did not have what I'm interested in," "want to go to college," and "scheduling problems"; (4) reasons for not enrolling in vocational schools included the need to prepare for college, "not thinking about it," lack of ability to participate in extracurricular activities in their home school, and a negative image of the vocational school in their community; (5) half the sample had a neutral attitude toward vocational education and the other half had a more negative attitude toward it; and (6) mothers were most influential in decisions not to enroll in vocational education, followed by friends, siblings, and teachers. Recommendations were made to improve the image of vocational education, to avoid scheduling conflicts with academic courses, and to market vocational education more effectively. (KC)

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Summary of
Research

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An Examination of Factors Influencing Students Not to Enroll in Secondary Vocational Education

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Introduction

Nationally reports are widespread about the decline in enrollment in vocational programs in high schools. In a 1988 national survey conducted by Communicating for Agriculture (1988), FFA state advisors and executive secretaries reported that student enrollment in vocational agriculture had decreased significantly. Fourteen states reported a decrease of 36,485 students. Eighty-eight percent of the respondents reported a decrease in enrollment, 11% reported no change in enrollment, while none reported an increase in enrollment.

According to the national FFA office, FFA membership had decreased 20 percent from 1978-88 while the overall high school population has decreased 12-13% (Communicating for Agriculture, 1988). Declining enrollment is a major concern for agricultural education programs all across the country.

Enrollment in vocational high school programs in Ohio has likewise been on the decline. From 1979 to 1986, enrollment in programs in vocational high schools fell 21%. Programs realizing the decline include: Agricultural Education, Business Education, Marketing Education, Health Education, Home Economics Education, Business Education, and Trade and Industry Education (Ohio Department of Education, 1987).

There are many plausible reasons for the decline in vocational enrollment. Population trends have shown a decline in the number of high school aged students. Increased high school graduation requirements have put pressure on students to ensure they are adequately prepared to graduate. College entrance requirements have gone up, making students hesitant of taking vocational courses.

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The decision to enroll in a vocational curriculum is one made by students with help from influential others. Vocational education is an elective curriculum, a program that many choose to follow based on career plans or interest level in the courses offered. College preparatory classes are required of the student who plans to enter college. Often a college preparatory curriculum leaves no room for an elective vocational course.

Many people influence a high school student to select a curriculum. Herr (1987) found that students will seek the advice of a teacher, parents, friends, counselors and other relatives before enrolling in vocational education. An individual is less likely to express a preference and more likely to express a rejection of an activity or field of study that has been from a valued person. Students are less likely to become involved in an activity if a valued person has a negative opinion of that activity.

The choice toward vocational education is a choice towards a career. Lam (1982) classified barriers that influence a student to not enroll in further educational pursuits. This classification system divides the reasons into three main categories. Intrapersonal reasons include: attitudes, perceptions, images, motivation, career maturity and value systems. The second category is immediate external reasons that include two subcategories: school factors (distance to schools, friends, extracurricular school activities) and influence of others (friends, parents, counselors, school personnel, neighbors, teachers and other relatives). The third category is remote external reasons which include: socioeconomic status of students, family size, parental income and parental educational levels.

Purpose and Objectives

Given that students can self-select a curriculum for their high school years, one needs to identify reasons for not selecting a vocational program. Many students enroll into an academic (college preparatory) or into a general education curriculum instead. The purpose of this study was to identify reasons why high school students elect not to enroll in vocational curriculums. Specific objectives were as follows:

1. To describe the characteristics of the schools (ratio of guidance counselor to students, student enrollment, teacher enrollment, teacher-student ratio, distance to a vocational school, number of teachers, number of counselors) selected in the sample.

2. To describe the characteristics (sex, race, socioeconomic status, curriculum choice—general or college preparatory) of the students who choose not to enroll in a high school vocational curriculum.

3. To describe the reasons students give for choosing not to enroll in a high school vocational curriculum.

4. To describe students' images of vocational education and vocational schools.

5. To determine the relationships between student characteristics and reasons for not choosing to enroll in a high school vocational curriculum.

6. To determine who influences a student to make a decision about enrolling in a high school curriculum.

7. To describe parents' images of vocational education.

8. To describe the parents' perceptions of why their child chose not to enroll in a high school vocational curriculum.

Methodology

Population and Sample

This study was developed as descriptive survey research. The target population of this study were high schools in Southwestern Ohio. Joint vocational schools were not included in the population. Five schools were selected at random from the population. These schools serve as "feeder" schools to joint vocational schools as well as offer vocational courses internally. Students in the study were all non-vocational 11th graders. All students present on the day of data collection were surveyed. There were 633 students surveyed in April of 1988.

Non-vocational students were defined as those enrolled in a college preparatory or general curriculum. Further curriculum choice guidelines were developed to define a college preparatory curriculum student.

College preparatory students are enrolled in courses to prepare for entry into a 4-year college or university. They usually take ACT or SAT college entrance examinations during their junior year. Courses selected by students enrolled in a college preparatory curriculum include: chemistry, algebra, physics, geometry, biology, advanced math, advanced science and/or foreign languages. These students average 2.7 vocational credits upon graduation from high school.

General curriculum students take course work of a general nature in order to earn enough credits for graduation. Courses selected include: consumer math, general math, general science, life science, earth science, industrial arts, general accounting and/or typing. General curriculum students average 4.6 vocational credits upon graduation from high school.

A vocational student, as defined in this study, is one that has spent a considerable proportion of time in vocational course work as compared with basic skill development. Vocational students take a substantial number of courses in vocational education and develop a concentration in one area, generally about 10% of their school time. Students who concentrate in a vocational specialty average 6.3 Carnegie Units of vocational course work upon graduation from high school. As juniors, they have been enrolled in at least two continuous years in vocational specialty program area including: agricultural education, home economics education, business education, marketing education, trade and industrial education, and health and safety services education.

Instrumentation

Data were collected using a questionnaire designed by the researchers and personally administered to all students in their English classes. A second questionnaire was sent to the schools in order to receive demographic information on the five schools. A set of questions was developed for the telephone interview to parents. These questions determined parents' perceptions of why their child chose not to enroll in vocational education. Guidance counselors sorted the students according to curriculum choice based on the set of guidelines previously described. Students were classified as

either academic (college preparatory) or general curriculum.

The student questionnaire was designed to acquire data on the following student variables: sex, race, socioeconomic status, image of vocational education and vocational schools, reasons for not enrolling in vocational education, people who influence students in making enrollment decisions, choice of future occupations and exposure to a joint vocational school. A review of the related literature and research reports and interviews with educators, assisted in the design of the instrument.

The socioeconomic status measurement questions were adapted from a previous research study, High School and Beyond, done by the National Opinion Research Center. Socioeconomic status was operationalized as a composite score of six variables including: family incomes, father/male guardian occupation and education, mother/female guardian occupation and education.

Validity

The questionnaire was pilot tested in one school with one intact class and field tested in another school. Construct validity was established by two panels of experts consisting of university faculty, vocational researchers and vocational graduate students. Comments from the panels were reviewed and revisions in the instrument were made.

Reliability

Test-retest procedures were used to determine coefficients of stability for important questionnaire items. The questionnaire was administered twice to the same class with a two-week interval between dates. Pearson product moment coefficients ranged from .42 to 1.00. Cronbach's alpha was evaluated to determine the reliability of summated scales. Cronbach's alpha coefficient ranged from .63 to .83.

Data Analysis

All completed questionnaires were coded by the researchers. Data were entered into a personal computer and analyzed using the Statistical Package for Social Sciences. Descriptive statistics were employed in order to describe the sample. Correlation coefficients were computed to show relationships. Analysis of variance was computed to describe differences in perceptions of vocational education and vocational schools among groups of students possessing different characteristics. Frequencies and measures of central tendency were computed and scattergrams were made to show relationships. Variables are reported as being significant at the .05 alpha. Data from open-ended responses were summarized and put into categories. Notes were taken to record the responses during the parent interviews.

Findings

Student Characteristics

Sixty percent of the sample were enrolled in an academic curriculum while 40% were in a general curriculum. Fifty-three percent of the sample was female while 47% was male. Students' race was tabulated, indicating that 80.3% of the sample are white (Caucasian), 17.1% are Black and 2.6% are in a category labeled Other (Hispanic, Asian, Native American).

Students' socioeconomic status were determined by obtaining a composite score based upon parents' education, occupation, income and household possessions owned. Scores were computed for each student, resulting in a wide range of scores. The students surveyed appeared to come from a cross-section of socioeconomic classes.

Student characteristics (curriculum choice, sex, race, socioeconomic status) were correlated with images of vocational education. Relationships show that students who are the most negative are white and male, from a higher socioeconomic status and in an academic curriculum.

The relationship between sex and students' image of vocational education was low (Eta = .11). There was a statistically significant difference ($p < .05$) in mean scores between male ($\bar{X}$ - 2.84) and females ($\bar{X}$ - 2.71). When looking at the relationship between sex and students' images of vocational schools there was not a statistically significant difference between males ($\bar{X}$ - 3.11) and females $\bar{X}$ = 3.08).

There was a statistically significant difference between curriculum choice and images of vocational education. The strength of the relationship (Eta = .21) however, is low. When looking at the relationship between curriculum choice and image of vocational schools, again there was a low relationship (Eta = .17) that is statistically significant. Students in a college preparatory curriculum had a higher mean score ($\bar{X}$ = 2.88) than did students in a general curriculum ($\bar{X}$ = 2.61). There were similar low, statistically significant relationships between race and images of vocational education/schools. Black students had a statistically significant difference in means scores on image of vocational education ($\bar{X}$ = 2.65) than did white students ($\bar{X}$ = 2.80) or from other races ($\bar{X}$ = 2.59). There was a low statistically significant relationship between socioeconomic status and image of vocational education. There was not a statistically significant difference between socioeconomic status and image of vocational schools. Image scores were $\bar{X}$ = 2.95 from those in the higher socioeconomic quartile and $\bar{X}$ = 2.69 from those in the lowest socioeconomic quartile.

Reasons for Not Enrolling in Vocational Education

Looking at the open-ended responses to students' reasons for not enrolling in vocational education, the following categories were developed.

Categories (rank order)

1. It did not have what I'm interested in (28%).
2. I want to go to college (25%).
3. Vocational education does not meet college requirements (8.5%).
4. There were scheduling problems (8%).
5. I did not want to change schools (5%).
6. No reason. I never thought of it (4%).
7. I have a poor image of vocational students (3.5%).
8. I just did not want to go (3%).
9. There was a lack of information about vocational education (2.4%).
10. Vocational education classes are too easy and/or not challenging (2%).
11. Vocational education is too difficult (2%).
12. I plan to attend vocational education (2%).
13. Vocational education narrows my career choices (1.5%).
14. My parents advised me against enrolling in vocational education (1.5%).
15. I have a poor image of vocational schools (1.4%).

16. My counselor advised me against enrolling in vocational education (0.8%).
17. I should have enrolled in vocational education (0.8%).
18. Vocational education is a waste of time (0.6%).

Likert scale responses to selected reasons for not enrolling in vocational education include the following top five reasons:

1. I plan to go to college.
2. I never thought of it.
3. I did not want to become a member of a vocational youth organization.
4. My image of the quality of vocational education.
5. It would limit my career choice.

Reasons for Not Enrolling in Vocational Schools (JVS)

Potential reasons for not enrolling in a vocational school were presented to the students. Results of the Likert scale responses show the following top five reasons:

1. This school will better prepare me for college.
2. I just never thought about attending.
3. Did not offer programs I want to take.
4. I would not be able to participate in extracurricular activities in my home school.
5. The image of the JVS in my community.

Thoughts About Vocational Education

Responses to an open-ended question regarding student thoughts when they think about vocational education were summarized into categories. The responses were judged by the researchers to be positive (46%), negative (43%), or neutral (11%). The categories and percentages are listed below.

Positive

1. Vocational education is fine for students who do not go on to college (16%).
2. Vocational education provides a good learning experience and opportunity (8%).
3. Vocational education trains students for a specific type of career (6%).
4. Vocational education helps a student become better qualified for a career (4%).
5. I want to or plan to take vocational education courses (4%).
6. Vocational education prepares students for a career directly after high school (3%).
7. Vocational education could help you in the future (3%).
8. Vocational education is interesting, fun or exciting (1%).

Negative

1. Vocational education is alright for some people, but it is not for me (10%).
2. Vocational education is for troublemakers. It has a bad reputation and poor image (9%).
3. Vocational education did not interest me (7%).
4. Vocational education is the easy way out. It is not challenging. It is too easy (5%).
5. Vocational education limits your knowledge about other career choices (3%).
6. Vocational education is like working for half a day and then taking classes for half a day (2%).

7. Vocational education is a waste of time (2%).
8. Vocational education is for low income, low intelligence students (2%).
9. Vocational education does not offer courses required for college preparation (2%).
10. Scheduling of vocational education is a problem (1%).
11. Vocational education classes are too difficult (1%).

Neutral

1. I never thought much about vocational education (7%).
2. Vocational education reminds me of vocational agriculture and farming (3%).
3. I do not know anything about vocational education (1%).

Thoughts About Vocational Schools (JVS)

Responses to the open-ended question regarding students' thoughts when they think about vocational schools (JVS) were summarized into categories. The responses were judged to be positive (31%), negative (49%) or neutral (49%). The categories and percentages are listed below.

Positive

1. JVS prepares students for a career directly after high school (7%).
2. JVS provides a good learning experience and career opportunity (7%).
3. JVS is interesting, exciting, and different from a regular high school (6%).
4. JVS is fine for students who do not go on to college (5%).
5. JVS trains students for a specific type of career (3%).
6. JVS is a nice place. It is unique (3%).

Negative

1. The JVS is for troublemakers. It has a bad reputation and poor image (18%).
2. The JVS is alright for some people, but it is not for me (12%).
3. The JVS is the easy way out. It is not challenging. It is too easy (5%).
4. The JVS did not have what I am interested in (5%).
5. The JVS is for low income, low intelligence, underachieving students (2.5%).
6. The JVS does not allow me to have enough time to be with my friends and activities (2%).
7. The JVS is too difficult (1.5%).
8. There are transportation and scheduling problems involved in attending the JVS (1%).
9. The JVS does not offer courses required for college preparation (1%).
10. The JVS limits my exposure to other types of careers.
11. Limits my career choice (1%).

Neutral

1. I never thought much about attending the JVS (15%).
2. I do not know anything about the JVS (5%).

Image of Vocational Education

Student's images of vocational education were measured with a composite score of students' responses to a list of potential reasons for not enrolling in vocational edu-

cation. Students responded whether they "strongly agreed", "agreed", "were unsure", "disagreed" or "strongly disagreed" with these reasons. Those who "strongly agreed" with the reasons (higher composite scores) were judged to have a negative image of vocational education. Those responding they "strongly disagreed" (lower composite score) were judged to have a positive image of vocational education. Fifty-five percent of the sample indicated that they had neither a positive nor negative image of vocational education. Thirty-one percent indicated they had a more positive image. Fourteen percent tended to have a more negative image of vocational education.

Image of Vocational Schools

Four of the five schools in the sample offer students an option to enroll in vocational classes at a nearby joint vocational school. Students were asked to respond to a set of reasons for not enrolling in the vocational school. Students' images of vocational schools was determined by computing a composite score. Students responded to whether they strongly agreed, agreed, were unsure, disagreed, or strongly disagreed to a set of nine reasons for not enrolling. Those who strongly agreed, (higher composite scores) were judged to have a negative image of vocational schools. Those with lower scores were judged to have a more positive image of vocational schools. Fifty percent of the students indicated they had neither a positive nor negative image of vocational schools. The rest of the sample indicated they had a more negative image of vocational schools.

Experience at Vocational Schools

Students in the sample who had an opportunity to enroll in a joint vocational school (JVS) were asked if they had ever attended on a regular basis. Seven percent indicated that they had been previously enrolled. Sixty-four percent indicated they had toured a JVS prior to their junior year of high school. Thirty-six percent said they had not been on a tour.

Future Occupations

Sixty-four percent of the respondents indicated they had selected a future occupation. The top occupations that students chose for their future include: engineer, teacher, accountant, computer programmer/operator, military, lawyer/legal assistant, business administrator.

Influencers on Enrolling in Vocational Education and Vocational Schools

Students were asked to indicate on the questionnaire if they had discussed their decision to not enroll in vocational education with selected people in their lives. Mothers/female guardians were the most influential people. Forty-six percent of the sample indicated that she was consulted when making a decision not to enroll in vocational education. Friends were consulted by 44% of the sample, followed by counselors (39%), brother/sister (22%), teacher (20%), other relative (18%), boy/girl friend (17%), athletic coach (5%).

Similar rankings of influencers were reported by students concerning making a decision to not enroll in vocational schools. Mother/female guardian was again ranked number one (42%), followed by friend (42%) father/male guardian (34%), counselor (25%), brother sister (22%), other relative (15%), boy/girl friend (14%), teacher (12%), athletic coach (4%).

Parents' Images of Vocational Education

In order to authenticate the data from students completing the questionnaire, the parents' images of vocational education were assessed. A telephone interview was conducted on a random sample of 16 parents. Ten questions were asked. Parents' feelings about vocational education were similar to those of their children. Many were aware of vocational curriculums offered at their child's school. Most felt that it was not cost prohibitive to send their child to a vocational program. Most believed their child had not yet made their future career choice. Parents felt they were influential in selecting their child's high school curriculum. Only one percent was aware of any activity sponsored by the school to look at what vocational education is all about. Half of the parents had personally visited a school offering a vocational program. Parents gave similar reasons as did the students for not enrolling in vocational education. Many indicated their child was going to attend college.

Implications and Recommendations

The data reveal student images of vocational education and vocational schools. The image of vocational education and vocational schools needs to be improved. Images are formed according to what people see and hear. It is apparent, by the students' comments, that what many see and hear is negative. In order to improve the images formed, many recommendations are offered.

Vocational students are judged by the way they look. One student made the comment that when he thought about vocational education he thought of "all the guys in black T-shirts welding something." Current attire could be improved if dress codes were enforced. Grooming standards should also be put in place. Students need more opportunity to see for themselves what is available in vocational programs and to see students performing in these programs. Evidences of vocational students' successes must be highlighted. Information about the benefits of the programs needs to be marketed. It is desirable to increase the amount of publicity for the awards and achievements of the vocational students in the home "feeder" schools and in the local community. Also emphasize the fact that vocational graduates can continue their education at technical schools, colleges and universities.

The number one reason that students are not enrolling in vocational education centers around a perception that students cannot schedule vocational and college courses. Several of the reasons cited by students in the sample reflect this concern. School administrators must recognize the direct clash in scheduling courses between the college preparatory curriculum and the vocational curriculum. They need to decide if the two curriculums should be blended in order to broaden the population served. Policy must change if this blending is to take place. High school scheduling will need to be more flexible to allow a student to enroll in a dual vocational and academic curriculum. As an elective offering vocational education is being "squeezed out" of the curriculum of the college-bound student. Alternative delivery systems such as open entry-open exit programs, will need to be created for vocational education. The college preparatory student could be encouraged to enroll in vocational education courses for enrichment, exploratory or investigative purposes. Entry into colleges, universities and technical schools could be accelerated as a

result of articulation agreements with vocational programs. More of these agreements should be encouraged and advertised.

Marketing efforts need to be targeting to mothers. Since they were determined to be the most influential person in the students' lives, we need to get information to them. Mothers need exposure to the vocational programs. Efforts should be made to feature mothers' groups on tours. Special events, advertising, promotions, public relations efforts and media attention should be directed at informing mothers about the benefits of vocational education.

Discussion

Vocational education should not only be looked upon and evaluated based on immediate job placement data, but also be viewed as a rung on the ladder of education toward a career requiring postsecondary training. Courses of interest to those preparing for future professional careers should be added. Based on the data, it would seem appropriate to offer vocational courses in pre-engineering, pre-accounting and pre-medicine for the college-bound student. Additional marketing studies should be conducted in order to determine the nature of curriculums that should be offered in vocational education. If current programs are of little interest to those students who did not enroll in vocational education, alternative offerings need to be developed and then marketed in an interesting fashion.

Recommendations for Further Research

Recommendations for further research are:

1. To study the future occupational training needs of the U.S. labor force and to survey junior high students to determine their career interests. With these data, administrators will be better prepared to design new program offerings in vocational education.

2. To determine if increased graduation requirements have made a significant impact on enrollment in vocational education.

3. To determine what pre-college vocational courses would be most applicable for future engineers, computer programmers/operators, and accountants.

4. To explore the mother-child relationship to determine how to use the mothers' influence to encourage enrollment in vocational education. One also needs to determine how she arrives at her images of vocational education.

5. To study other additional student characteristics of those enrolled in academic and general curriculums and to determine why a student selects a general curriculum over a vocational or academic curriculum.

6. To replicate this study in a larger scale in a different state or in a nationwide survey. It could also be adapted in a smaller scale for use by individual vocational schools.

7. To design a similar image study for students at the 7th and 8th grade levels. The purpose would be to determine when images of vocational education are formed and what those images are. A follow-up study on the same 7th and 8th grade students could be taken when they reach the 11th grade to see if images change.

8. To design a follow-up study on this 11th grade sample to see if any students enroll in vocational courses during their 12th grade or enroll in a technical school after graduation.

9. One can explore reasons why students enroll in vocational education. The reasons given can be compared with the results of this study.

10. One can study the student characteristics of those currently enrolled in vocational education (grade point average, class rank, socioeconomic status, honors earned). Comparisons can be made between students enrolled in general and academic curriculums.

11. A model needs to be developed in order to administer vocational education for students in dual vocational and academic curriculums. Further study is needed in order to establish how these programs will be scheduled and delivered.

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Summary of Research

Nationally reports are widespread about the decline in enrollment in vocational education programs in high schools. There are many reasons for this decline including fewer high school ag ed students, increased high school graduation requirements, and increased college entrance requirements. This study identifies reasons why high school students elect not to enroll in vocational education programs. Vocational education techers, vocational administrators, state supervisory staff, and teacher educators should find this information useful in program planning and student recruitment.

This summary is based on a study of non-vocational 11th grade students in Southwest Ohio. Rosemarie Rossetti is Assistant Professor in the Department of Agricultural Education, Jack Elliot is Assistant Professor at Michigan State University; Cynthia L. Price is an Ag Ed Instructor at Fairbanks High School; and Philip S. McClay is General Manager of Water Filtration Company, Marietta, Ohio. Special appreciation is due to James R. Stone, III, University of Minnesota; Dean Sutphin, Cornell University; and Dewey Adams, The Ohio State University for their critical review of the manuscript prior to publication.

Research has been an important function of the Department of Agricultural Education since it was established in 1917. Research conducted by the Department has generally been in the form of graduate theses, staff studies, and funded research. It is the purpose of this series to make useful knowledge from such research available to practitioners in the profession. Individuals desiring additional information on this topic should examine the references cited.

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